UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
VU, THONG H

ART UNIT	PAPER NUMBER
2142	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 July 2005</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   Claims 1-36 are pending.

Response to Arguments

2.   Applicant's arguments filed 7/01/05 have been fully considered but they are not

persuasive to overcome the prior art.

A. As per claim 1, applicant argues the prior art failed to teach or suggest

"scheduling periodic transmission of the frame from a node in the network".

Examiner points out the prior art taught "scheduling transmission" [Malladi,

schedule transmission, col 21-22].

B. As per claim 7, applicant argues the prior art does not teach or suggest

"response to determining the first maximum size and the second maximum size,

scheduling periodic transmission of the first and second frames beginning at respective

first and second scheduled times"

Examiner points out the prior art taught the first size or speed [Harwood, a first

data transmission speed, col 42 lines 20-67] and second size or speed [Harwood, a

second data transmission speed, col 42 lines 20-67] and scheduling transmission

[Malladi, schedule transmission, col 21-22].

C. As per claim 11, applicant argues the prior art does not teach or suggest

"repeatedly transmitting the first frame plurality of nodes in the network at a first rate".

Examiner points out the prior art taught "repeatedly transmitting the first frame

plurality of nodes in the network at a first rate" [Harwood, a first and second data

transmission speed, col 42 lines 20-67] and scheduling transmission [Malladi, schedule

transmission, col 21-22]. It was clearly that by scheduling the transmission the first

frame or size many times or repeatedly as a design choice.

   D. As per claim 15, applicant argues the prior art does not teach or suggest

"building a transmission schedule table for transmission times for sequences of frames

of each designated type"

   Examiner points out the prior art taught "building a transmission schedule table

for transmission times for sequences of frames of each designated type" such as using

a scheduling transmission [Malladi, schedule transmission, col 21-22] for selected (i.e.:

filtered) the frame type [Harwood, a first frame format, a second frame format, col 7 line

29-col 8 line 3; filtering and comparison, col 39 line 1-15; FDDI frame type, col 10 lines

57-col11 lines 20].

   Thus, all limitations have been taught by the prior art.

Double Patenting

3.   The nonstatutory double patenting rejection is based on a judicially created
doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the
unjustified or improper timewise extension of the "right to exclude" granted by a patent
and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11
F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA
1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*,
418 F.2d 528, 163 USPQ 644 (CCPA 1969).
   A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be
used to overcome an actual or provisional rejection based on a nonstatutory double
patenting ground provided the conflicting application or patent is shown to be commonly
owned with this application. See 37 CFR 1.130(b).
   Effective January 1, 1994, a registered attorney or agent of record may sign a
terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with
37 CFR 3.73(b).

Claims 1-36 are rejected under the judicially created doctrine of double patenting

over claims 1-18 of U. S. Patent No. 6,381,647 B1 since the claims, if allowed, would

improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the

patent and is covered by the patent since the patent and the application are claiming

common subject matter, as follows:

(Patent '647, claim 1). An apparatus for initiating transmission of a plurality of frames
in a network having a plurality of nodes serially interconnected in a loop topology, each
frame identified by one of a plurality of type designations, the apparatus comprising:
    a schedule memory storing:
    a timer value for each frame type indicating a window for transmission of a frame
type,

    a delta time indicating the frequency of transmission of a frame type;

    a sequence size for each frame type;

    a list of frames to be transmitted for each frame type; and
    a sequencer operable to search for available bandwidth during a sample
window and access the schedule memory to initiate transmission of one or more of the
frames in the list based on sequence size and available bandwidth.

(Application, claim 1) a method for communicating information in a network having a

plurality of nodes, comprising:

        providing a frame for storing information, the frame identified by a frame type;

        determining the frame type of the frame;

        in response to determining the frame type, scheduling periodic transmission of

the frame from a node in the network; and

        transmitting the frame at the scheduled time.

Thus, It was obvious both invention discloses a technique of transmit a

packet/frame type via network based on a schedule time.

Furthermore, there is no apparent reason why applicant was prevented from

presenting claims corresponding to those of the instant application during prosecution of

the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158

USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-36 are rejected under 35 U.S.C. § 103 as being unpatentable over

Harwood [5,604,867] in view of Malladi [5,638,518].

4.   As per claim 1, Harwood discloses a method for communicating information in a

network having a plurality of nodes [Harwood, ATM, LAN, col 7 lines 31-40; network

topology loop conditions, col 40 line 3], comprising:

providing a frame for storing information, the frame identified by a frame type;

determining the frame type of the frame [Harwood, a first frame format, a second frame

format, col 7 line 29-col 8 line 3; FDDI frame type, col 10 lines 57-col11 lines 20];

However Harwood does not explicitly detail

in response to determining the frame type, scheduling periodic transmission of the frame from a node in the network; and transmitting the frame at the scheduled time.

In the same endeavor, Malladi discloses a FDDI/ATM network environment including frame type, loop topology, schedule transmission [Malladi, frame type, col 3 lines 30; loop topology, col 4 line 43; schedule transmission, col 21-22]

Therefore it would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the schedule transmission as taught by Malladi into the Harwood's apparatus in order to utilize the frame type and loop topology. Doing so would provide a dynamic link can be designed in an application specific integrated circuit with custom specific functions appended thereto.

5.   As per claim 2, Harwood-Malladi disclose determining the frame type further comprises determining the maximum size of the frame [Harwood, maximum rate, col 19 lines 43,col 22 line 58,col 23 line 16];

6.   As per claim 3, Harwood-Malladi disclose determining the frame type further comprises determining the rate of transmission of the frame [Harwood, rate counter, col 22 line 66].

7.   As per claim 4, Harwood-Malladi disclose scheduling transmission of the frame comprises comparing a frame priority to the priority of a plurality of additional frames [Malladi, schedule and priority, col 21-22 lines 50-60; priority, col 27-28 lines 10-20].

8.   Claims 14,25 contain the similar limitations set forth of claim 4. Therefore, claims

14,25 are rejected for the similar rationale set forth in claim 4.

9.   As per claim 5, Harwood-Malladi disclose determining the maximum size of the

frame comprises reading the maximum size of the frame from a list, the list storing

possible frame types and the maximum size of each possible frame type [Harwood,

maximum payload size, col 29 line 5].

10.   As per claim 6, Harwood-Malladi disclose determining the rate of transmission of

the frame comprises reading the rate of transmission of the frame from a list, the list

storing possible frame types [Harwood, a list of MAC addresses of each frame, col 14

lines 1-9] and the rate of transmission of each possible frame type [Harwood, maximum

transmission rate, col 5 lines 7-37].

11.   As per claim 7, Harwood-Malladi disclose a method for communicating

information in a network having a plurality of nodes, comprising:

        providing a first frame for storing information, the frame having a first maximum

size [Harwood, a first data transmission speed, col 42 lines 20-67];

        providing a second frame for storing information, the frame having a second

maximum size, the first size being unequal to the second size [Harwood, a second data

transmission speed, col 42 lines 20-67];

determining the first maximum size and the second maximum size [Harwood,

maximum payload size, col 29 line 5];

response to determining the first maximum size and the second maximum size,

scheduling periodic transmission of the first and second frames beginning at

respective first and second scheduled times [Malladi, frame type, col 3 lines 30; loop

topology, col 4 line 43; schedule transmission, col 21-22];

transmitting the first frame at the first scheduled time; and transmitting the

second frame at the second scheduled time [Malladi, frame type, col 3 lines 30; loop

topology, col 4 line 43; schedule transmission, col 21-22].

12.   As per claim 8, Harwood-Malladi disclose the first frame has a first frame type

and the second frame has a second frame type [Harwood, the type of packet field, col 7

lines 25-60] and determining the first maximum size and the second maximum size

comprises comparing the first and second frame types to a predefined set of frame

types [Harwood, variable length, col 7 line 66 et seq.].

13.   As per claim 9, Harwood-Malladi disclose determining the first and second rates

and wherein scheduling periodic transmission of the first and second frames further

comprises scheduling periodic transmission in response to determining the first and

second rates [Malladi, frame type, col 3 lines 30; loop topology, col 4 line 43; schedule

transmission, col 21-22].

14.   As per claim 10, Harwood-Malladi disclose the first frame has a first frame type
and the second frame has a second frame type and determining the first and second
rates comprises comparing the first and second frame types predefined set of frame
types [Harwood, filtering and comparison, col 39 line 1-15].

15.   As per claim 11, Harwood-Malladi disclose a method for communicating
information in a network having a plurality of nodes, comprising:

providing a first frame for storing information and second frame for storing
information [Malladi, frame type, col 3 lines 30];

repeatedly transmitting the first frame plurality of nodes in the network at a first
rate [Harwood, a first and second data transmission speed, col 42 lines 20-67, frame
filter, col 5 lines 3-28]; and

repeatedly transmitting the second frame to a plurality of nodes in the network at
a second rate, the first rate being unequal to the second rate [[Harwood, a second data
transmission speed, col 42 lines 20-67, frame filter, col 5 lines 3-28].

Therefore it would have been obvious to an ordinary skill in the art at the time the
invention was made to incorporate the schedule transmission as taught by Malladi into
the Harwood's apparatus in order to utilize the frame filter, first and second transmission
speed. Doing so would provide a first transmission speed/rate with a first frame and the
second speed/rate with other frame type based on the schedule which can be design in
an application specific integrated circuit with custom specific functions appended
thereto.

16.   As per claim 12, Harwood-Malladi disclose providing a third frame for storing

information, and transmitting the third frame to a plurality of nodes the network only

when the repeated transmission of the first and second frames at the first and second

rates leaves available bandwidth for transmission of the third frame [Harwood, different

speed, col 11 lines 20-38].

17.   As per claim 13, Harwood-Malladi disclose repeatedly transmitting the first frame

at first rate comprises transmitting the first frame at a rate specified in a list stored in

memory [Harwood, different speed, col 11 lines 20-38].

18.   As per claim 15, Harwood-Malladi disclose a method for initiating transmission of

sequence of related data frames in a network having a plurality of nodes serially

interconnected in a loop topology, each frame identified by one of a plurality type

designations [Harwood, ATM, LAN, col 7 lines 31-40; network topology loop conditions,

col 40 line 3] comprising:

        building a transmission queue for frames of each designated type, the queue

organized by frame type [Malladi, frame type, col 3 lines 30 and containing pointers to

the header of each sequence of frames [Harwood, header with information word, col 8

lines 16-67; indicator, col 21 lines 1-6];

building a transmission schedule table for transmission times for sequences of

frames of each designated type [Malladi, frame type, col 3 lines 30; loop topology, col 4

line 43; schedule transmission, col 21-22]; and

transmitting in response to the transmission schedule table a sequence of frames

of a first designated type to each of the serially interconnected nodes of the network

when an entry exists for a given designated type of frame [Malladi, frame type, col 3

lines 30; loop topology, col 4 line 43; schedule transmission, col 21-22]

19.   As per claim 16, Harwood-Malladi disclose determining availability of the serially

interconnected nodes of the network for transmission of data frames of a given

designated type [Harwood, frame filter, col 5 lines 3-28].

20.   As per claim 17, Harwood-Malladi disclose determining availability of the nodes

of the network for transmission of data frames of a second designated type upon

completion of transmission of data frame of a selected designated type [Harwood, frame

filter, col 5 lines 3-28].

21.   As per claim 18, Harwood-Malladi disclose storing frames of data by frame type

for later transmission to the plurality of serially interconnected nodes [Harwood, serial

port, col 12 line 49].

22.   As per claim 19, Harwood-Malladi disclose building a transmission queue further

comprises building a queue for isochronous frame types [Harwood, data stream, col 30

lines 55-67] and building a queue asynchronous frame types [Harwood, ATM, LAN, col

7 lines 31-40].

23.   As per claim 20, Harwood-Malladi disclose transmitting a sequence of frames of

a second type to each of the plurality of serially interconnected nodes during a sample

window based on available bandwidth [Harwood, bandwidth, col 39 lines 1-15].

24.   As per claim 21, Harwood discloses transmitting a sequence of frames of

additional designated types at a frame type start time for each additional frame type at a

predetermined rate during an allocated portion of a sample window for each of the

additional frame types as inherent feature of packet type.

25.   Claims 22-24,26-27; 28-31;32-33;34-36 contain the similar limitations set forth of

claims 15-21. Therefore, claims 22-24,26-36 are rejected for the similar rationale set

forth in claims 15-21.

        THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time
policy as set forth in 37 CFR 1.136(a).
        A shortened statutory period for reply to this final action is set to expire THREE
MONTHS from the mailing date of this action. In the event a first reply is filed within
TWO MONTHS of the mailing date of this final action and the advisory action is not
mailed until after the end of the THREE-MONTH shortened statutory period, then the
shortened statutory period will expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thong Vu*, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Andrew Caldwell*, can be reached at (571) 272-3868. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
Art Unit 2142